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The Global Village: A Three Continent Evaluation

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Abstract

Global information systems, or at least the infrastructure therefore, are a reality, not just a possibility. Specifically, the Internet, the World Wide Web, email, gopher, and information utilities (e.g., CompuServe) provide the basis for building global information systems. To compare the relative levels of students' general awareness and knowledge of the Internet, surveys were conducted to help identify specific Internet tools and techniques students in Hong Kong, the Czech Republic, and the United States feel comfortable using. Additionally, the surveys identify the sources of particular Internet knowledge for each student sample. This three continent investigation should provide insight as to whether the era of the global village has truly arrived.

Introduction

For many years, the idea of a global village has been touted as a future way of life. The proliferation of advanced communication tools and other information technologies around the world may be impetus for that prophecy's fulfillment. Communicating around the world is now as easy as communicating across the street--and possibly more importantly, can be accomplished without additional expense. Information technology such as electronic mail, fax machines, pagers, and of course computers, have caused businesses of all sizes around the world to undergo many changes.

The Internet may bring one of the biggest changes for organizations yet. "Now that computing is astoundingly inexpensive and computers inhabit every part of our lives, we stand at the brink of another revolution. This will involve unprecedentedly inexpensive communication; all the computers will join together to communicate with us and for us. Interconnected globally, they will form a network, which is being called the information highway. A direct precursor is the present Internet..."(Gates 1995). The Internet provides access to a vast array of information, services, and products for an estimated on-line worldwide community of 30 million people (Rosenbaum 1996) in over 150 nations (Sussman and Pollack 1995). The global village may finally be here.

If this is the case, then global literacy of communication and group collaboration via the Internet becomes a critical issue. As a contribution to an evaluation of that literacy, this study assesses students' knowledge about various Internet components. Additionally, it ascertains their comfort level with performing certain tasks on the Internet and their sources of Internet knowledge.

Sample

To gain an international perspective on Internet familiarity and knowledge, a convenience sample of students in Hong Kong, the United States, and the Czech Republic was chosen. According to the *South China Morning Post*, there are about 100,000 Internet subscribers in Hong Kong, with about 2,000 signing up each week. The rate at which technology is being embraced in Hong Kong makes it an interesting and relevant population to study. Three hundred fourteen surveys were collected in Hong Kong and analyzed in this study.

In the United States, 312 questionnaires were collected at a regional comprehensive university. The Czech Republic should make a rather interesting comparison. The price of a cellular phone, for example, is estimated at $1,500 U.S. dollars. The questionnaire will be administered in the Czech Republic in May of 1997.

Research Instrument

Data was collected via a two-page questionnaire consisting of five sections. General computer-related questions such as "Have you heard of the information superhighway?" and "Do you own a PC?" were included in section one. Students' level of familiarity with various aspects of the Internet was collected by utilizing a seven point Likert scale with choices ranging from "Never Heard of" to "Use Daily" in section two. Students were asked to describe their familiarity level with Internet components such as Telnet, Finger, Usenet newsgroups, the World Wide Web, and gopher.

Sources of Internet knowledge were also of interest in this study. Students were asked to identify, using a Likert scale, the importance of knowledge sources. The choices included: 1) classes, 2) textbooks, 3) friends/colleagues, 4) work, 5) family, 6) newspapers, and 7) TV shows/movies. The seven-point scale used to measure the sources of knowledge ranged from "Strongly Disagree" to "Strongly Agree." The same Likert scale was used to measure students' level of comfort performing certain functions on the Internet, such as: 1) downloading data from the Internet, 2) printing from the Internet, 3) sending electronic mail, 4) forwarding electronic mail, 5) using FTP (file transfer protocol), 6) using gopher, 7) participating in electronic discussion groups, and 8) surfing the Internet. Finally, demographic questions such as major, classification, age, gender, and ethnic background were asked. A similar questionnaire was used by Jones and Berry (1995) to assess student knowledge about information technology.

Instrument Validity And Reliability

A pre-test was conducted in an American university to evaluate the appropriateness and validity of the questionnaire. The appropriateness of the language was also investigated in Hong Kong by allowing several Chinese administrators to review the instrument prior to distribution. The same process will be followed before administering the questionnaire in the Czech Republic.

Data from Hong Kong and the United States has been factor analyzed and tested for reliability. Five constructs were identified via the factor analysis: 1) on-line services, 2) advanced Internet Tools, WEB tools, classroom learning, and comfort level. Factor loadings and Cronbach's alpha will be reported for the various constructs. Once the Czech data has been collected, the various components of the Internet will be factor analyzed (Kerlinger, 1986; Hair, et al, 1992) to reduce to total number of variables down to a more manageable level. Once constructs have been identified, Cronbach's alpha (Cronbach 1951) will be evaluated to ensure reliability of the measures. The same process will be followed for the sources of information and comfort level.

Expected results

In the results section, the descriptive statistics for the sample will be presented. Mean values and standard deviations will be presented in a table form and discussed. After validity and reliability have been established, multivariate analysis of variance will be used to determine if there is a difference in perceptions concerning the various components using demographic variables such as nationality, age, computer experience, number of computer classes taken, etc. Additionally, mean values will be presented and discussed for the constructs identified via the factor analysis.

Summary

The Internet is changing society as we know it. Communication and information sharing, on an international level, has become a relatively easy and inexpensive task. This study investigates the perceptions of students in Hong Kong, the United States, and the Czech Republic. The comparisons should provide useful in understanding the various levels of Internet expertise/understanding from an International perspective.

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